

CLAIMS

What is claimed is:

- 1 1. A method for testing a transmission system, the method
2 comprising:
3 receiving a time division multiplexed (TDM) stream on an input of the
4 transmission system, wherein the TDM stream comprises a plurality of data
5 fields and a plurality of unused fields;
6 inserting test data in one or more of the plurality unused fields of the
7 TDM stream;
8 transferring the TDM stream along a plurality of components of the
9 transmission system; and
10 comparing the test data against the transferred test data.
- 1 2. The method of claim 1, wherein transferring the TDM stream
2 comprises generating a connection path between the plurality of components of
3 the transmission system.
- 1 3. The method of claim 2, wherein the connection path is configured
2 to transfer the test data between the plurality of components of the transmission
3 system using one or more of the plurality unused fields of the TDM stream.
- 1 4. The method of claim 3, further comprising storing the transferred
2 test data prior to comparing the test data against the transferred test data.

1 5. The method of claim 3, further comprising generating an error flag
2 if the test data is different from the transferred test data.

1 6. A method for testing a digital signal processor (DSP) of a
2 transmission system, the method comprising:
3 receiving a time division multiplexed (TDM) stream on an input of the
4 transmission system, wherein the TDM stream comprises a plurality of data
5 fields and a plurality of unused fields;

6 generating a signal, wherein the signal is generated by the DSP
7 inserting test signal in one or more of the plurality unused fields of the
8 TDM stream;

9 transferring the TDM stream along a plurality of components of the
10 transmission system; and

11 comparing the test signal against the transferred test signal.

1 7. The method of claim 6, wherein transferring the TDM stream
2 comprises generating a connection path between the plurality of components of
3 the transmission system.

1 8. The method of claim 7, wherein the connection path is configured
2 to transfer the test data between the plurality of components of the transmission
3 system using one or more of the plurality unused fields of the TDM stream.

1 9. The method of claim 7, further comprising generating an error flag
2 if the test signal is different from the transferred test signal.

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1 10. A transmission system comprising:
2 a controller, wherein the controller is operable to set up call connections
3 between interfaces of the transmission system;
4 a framer block coupled to the controller, wherein the framer block is
5 operable to generate time division multiplexed (TDM) stream having a plurality
6 of data fields and a plurality of unused fields;
7 a logic circuit coupled to the controller and the framer block, wherein the
8 logic circuit is operable to insert test data in one or more of the plurality of
9 unused fields; and
10 a plurality of time slot interchangers coupled to the controller and the
11 FPGA, wherein the TSIs are operable to switch the fields of the TDM stream.

1 11. The transmission system of claim 10, wherein the time slot
2 interchangers are further operable to transfer the test data along components of
3 the transmission system using one or more of the plurality of unused fields.

1 12. The transmission system of claim 11, wherein the logic circuit
2 comprises a receiver, the receiver operable to store the transferred test data.

1 13. The transmission system of claim 12, wherein the logic circuit
2 further comprises a comparator, the comparator configured to compare the
3 inserted test data and the transferred test data.

1 14. The transmission system of claim 13, wherein the logic circuit is
2 further operable to generate an error flag if the inserted test data is different from
3 the transferred test data.

1 15. The transmission system of claim 14, wherein the logic circuit
2 comprises a field programmable gate array.

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